

6-30-1968

Department of Sea and Shore Fisheries 25th Biennial Report

Maine Department of Sea and Shore Fisheries

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A high-contrast black and white photograph showing the silhouette of a fisherman on a boat. The fisherman is wearing a cap and a jacket, and is pointing his right arm towards the right side of the frame. He is standing on a wooden structure, possibly a deck or a ladder, with ropes and other equipment visible. The background is a light, uniform color.

State of Maine

*Department of
Sea and Shore Fisheries*

*25th
Biennial Report*

State of Maine
Department of
Sea and Shore Fisheries

25th BIENNIAL REPORT

For Period
July 1, 1966 to June 30, 1968

State House
Augusta, Maine

Published under Appropriation No. 4310

STATE OF MAINE

BIENNIAL REPORT OF
DEPARTMENT OF SEA AND SHORE FISHERIES

Augusta, Maine

To the Honorable Governor and Executive Council:

Sirs:

I herewith transmit, in compliance with the law, the report of the Department of Sea and Shore Fisheries, for the two years ending June 30, 1968, together with statistics and other pertinent data.

RONALD W. GREEN

Commissioner

DEPARTMENT OF SEA AND SHORE FISHERIES

State House
Augusta, Maine

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Commissioner Ronald W. Green

DEPARTMENT OF SEA AND SHORE FISHERIES

25th Biennial Report

RONALD W. GREEN, *Commissioner*

INTRODUCTION

Changes in Maine's commercial fishing industry and the expansion of services within the Department have all added up to one of the busiest two-year periods ever recorded. There have been legislative hearings on fisheries matters at both the state and federal levels; there have been national and international conferences; and there have been innumerable meetings with industry groups and with various state and federal agency representatives during this period. In addition, the areas of responsibility for the Department have been rapidly increasing, and these now include such vital matters as a role in the development of the state's oceanographic resources, offshore oil explorations, and the possible development of a free port in Machias Bay.

During the biennium it was not surprising to find the Department undergoing a certain amount of growing pains. Thanks to federal funds provided by the Commercial Fisheries Research and Development Act (Public Law 88-309) and to state matching funds, it has become possible to undertake a number of new programs, particularly in the field of marine research. As a result of these new programs, the work load increased substantially for the existing staff. Gradually, however, new personnel have been added to the Department to help implement the new programs. In fact, since the expansion of services began, a total of 30 employees have joined the Department. These include 18 in the Research Division (4 of whom are seasonal), 2 in the Division of Promotion and Marketing, 2 in the Enforcement Division, and 8 added to the Administration staff.

Administration

As a result of this growth, the operations of the Department have become much more complex, especially for the administrative section. In the interests of efficiency and to ensure a uniformity of purpose

behind all Department activities, the new position of Coordinator of Research and Development was established.

The duties and responsibilities of the Coordinator are broad and varied, but his primary function is to maintain a close liaison with all division directors and project leaders. He and his staff are responsible for all fiscal and budgetary procedures; for personnel recruitment, records and reclassifications; for the upkeep of facilities and for equipment inventories; and for relations between the Department and the Bureau of Commercial Fisheries and Sport Fisheries of the U. S. Fish and Wildlife Service.

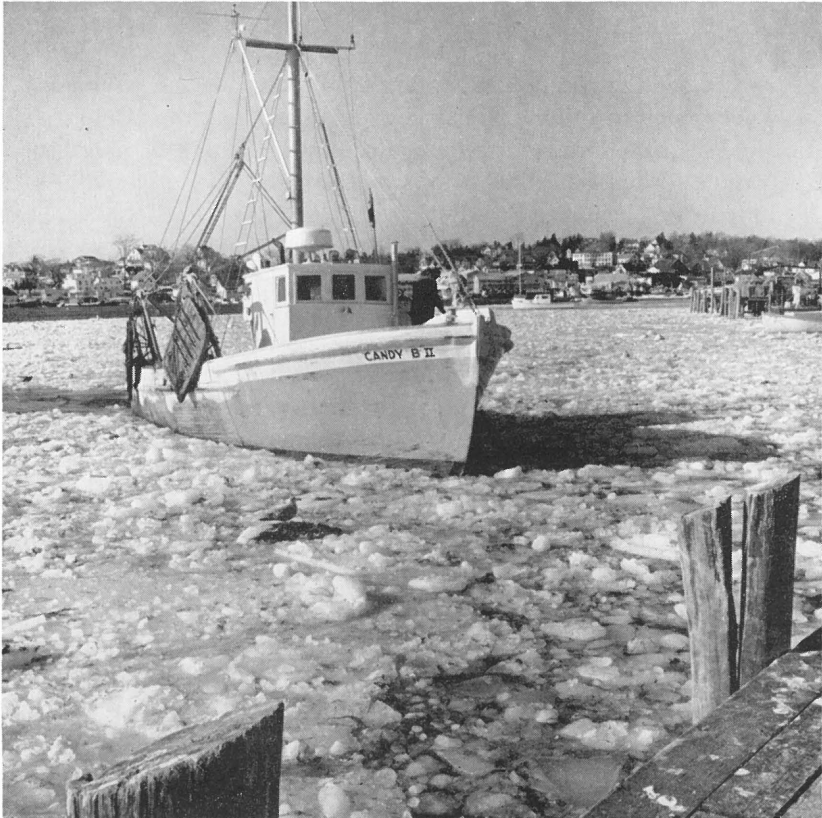
Meetings and Conferences

As the problems of world, national and regional fisheries become more complex, and as the fishing activities of nations and of states have a greater and greater impact on each individual segment, high-level conferences have become more and more frequent. As Commissioner I have attended many such conferences during the past two years, traveling to the Soviet Union, London and Boston for meetings of the International Commission for Northwest Atlantic Fisheries, to various states for meetings of the Atlantic States Marine Fisheries Commission, and to Bergen, Norway, at the invitation of Decca Navigator System to observe the operation of a new electronic navigation program.

In addition, numerous trips to Washington, D.C. were required. Meetings were held there, under the auspices of the State Department, for the Fishing Industry Advisory Committee. There were also conferences on such matters as the location of fish protein concentrate manufacturing plants, and on the activities of foreign vessels fishing off the Atlantic coast. With industry members, I attended hearings on fisheries inspection bills and on tariff problems, and briefs were prepared and presented in behalf of the industry as a whole and the ocean perch fishery in particular. And finally, as a member of the Bi-State Commission on Oceanography it was necessary to attend numerous meetings in Washington, and also in Maine and New Hampshire.

As a member of the New England Fisheries and Conservation Committee I have been closely connected with the recent developments relating to seismic explorations for oil in the Gulf of Maine. And, by way of a change of pace, I have served as a member of the board of di-

rectors of the New England Aquarium—a new multi-million-dollar educational, recreational and research facility which has been under construction on Boston's Central Wharf.



Maine shrimp trawler heads for port through ice-clogged harbor waters.

Fisheries Problems

No report would be complete that did not point out that the previous two years had their share of problems for Maine's commercial fishing industry. During the latter part of the biennium the state's ocean perch fishery was faced with a most serious situation. Competition from imported ocean perch products, which for some time had been of critical concern to our domestic industry, finally reached such proportions that the survival of this fishery in Maine has been in doubt.

The crisis was precipitated by governmental action in Canada which provided direct subsidies to the fishermen for haddock, flounder

and ocean perch. These subsidies, when added to the other disadvantages under which our domestic fishery was forced to operate — such disadvantages as higher labor and materials cost, an over-age fishing fleet, and an unfavorable monetary exchange rate — made competition impossible.

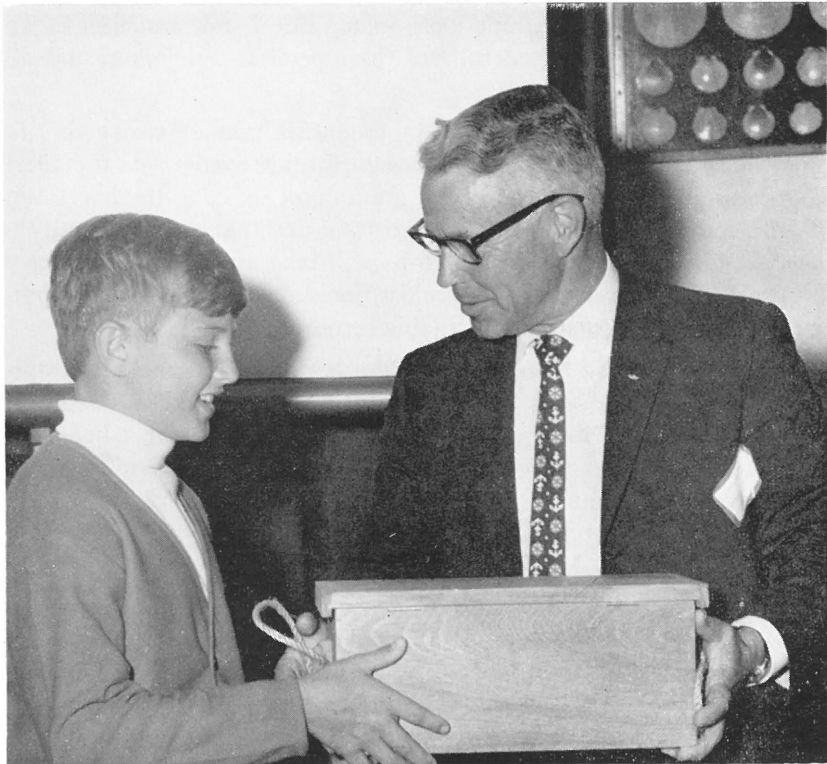
It was clear that immediate action was required, and, following a series of meetings with industry representatives, the Department launched a three-pronged attack — through Maine's Congressional Delegation, through the Bureau of Commercial Fisheries, and through the Bureau of Customs. In addition, briefs setting forth the facts of the case were submitted to the Trade Information Committee of the Office of the Special Representative for Trade Negotiations, and to the Committee on Ways and Means of the United States House of Representatives. At the present time the Bureau of Customs is investigating the matter to determine whether or not countervailing duties should be applied to offset the unfair advantage enjoyed by Canadian ocean perch producers and processors. If such countervailing duties are in fact applied, the first step toward a renewed prosperity for an important segment of the state's fishing industry will have been taken.

* In the 23rd and 24th Biennial Reports concern was expressed over the decline of production in Maine's lobster fishery. During the past two years, production statistics have done little to clarify the picture. In 1966, for example, the total catch increased by a little over a million pounds from the previous year, but the total of 19,915,816 pounds remained just under the "magic" twenty million pound figure which for years was the usual production goal.

Fluctuations in production have quite naturally focused considerable attention on the lobster fishery and have given impetus to both state and federal research programs designed to provide factual answers to the basic questions raised by both the industry and the millions of lobster eaters across the nation. They have also stimulated the Maine Legislature to seek ways in which to help the industry. Efforts were made to draft regulations which would limit the lobster fishery in some equitable and workable manner which would ensure a continuing livelihood for all of the state's full-time lobster fishermen. Proposals were considered for the limiting of the number of traps fished, to limiting the time fishing would be permitted, or to limiting the number of licenses issued. There was, however, no general agreement within the industry as to which approach would be most satisfactory.

Finally, the 103rd Legislature did pass one piece of limiting legislation, making it unlawful to haul traps during the period of June 1 to August 31 from 4:00 p.m. on Saturday to one-half hour before sunrise the following Monday. As of this writing, this regulation has not been in effect long enough to make an accurate assessment of its effectiveness.

The whiting industry, too, has had its ups and downs during the past two years. While there has been a good supply of fish to be harvested, whiting processors have run into periodic marketing problems, many of which were caused by imports of so-called whiting products from Argentina. Meetings were held with the industry and with federal officials to see if the imported products might be in violation of misbranding regulations and to see what steps might be taken to alert the U. S. Food and Drug Administration to the poor quality of these imports.



Timur Galen of Brunswick receives Maine Sea Chest from Commissioner Green for his role in the Department's new film.

Increased marketing efforts have been made by the Department for such species as clams, mussels and crabs. As a result, clam production has been up during the biennium. While the availability of clams continued to improve, the unpredictability of a steady source of supply on occasion created marketing problems. Soft-shell clams from the Maryland area continued to offer strong competition to Maine clams in the markets of the Northeast, but Maine dealers with a reputation for quality frequently found they had more markets than they could supply. Crab production has shown little change, but there are indications that there may be a growing market for Maine's rock crabs in the future, especially if new crabmeat products are developed. The marketing of mussels continues to be difficult. A study of the mussel markets in the vicinity of New York, which was conducted by Department personnel, showed that Maine mussels were generally favored in that area. But two factors continued to make development of a significant mussel industry seem unlikely in the near future: lack of a steady and dependable production on the one hand, and lack of acceptance by consumers generally of the mussel as a delicious and desirable seafood.

There was a growing interest in the utilization of seaweeds and other marine plants during the biennium. In this connection, the 103rd Legislature made provisions for the granting of rights to the harvesting of Irish moss and other seaweeds in certain designated areas along the coast. It is expected that Maine firms will take advantage of the new law to conduct research in the cultivation, conservation and offshore harvesting of this potentially valuable resource.

The Maine sardine industry enjoyed a period of reasonable stability during the past two years. Markets were generally good, although the herring were hardly more cooperative than usual. The unpredictability of the fish was offset to a degree by the industry's ability to transport the fish rapidly from areas where they were plentiful to plants in areas where fish were scarce. A considerable quantity of Canadian herring was also shipped to Maine processors. As a result, most plants were able to pack fish on a fairly regular schedule.

Herring research programs conducted by the Bureau of Commercial Fisheries have continued. In addition, the Maine Sardine Council with the cooperation of the Marketing Division of this Department continued to promote the sales of the finished products in both domestic and foreign markets. A contract with the Dynatech Corporation of Cambridge, Massachusetts, which was partly financed by state and

federal funds and partly by funds from the Sardine Council, for the development of a new processing machine was terminated during the biennium due to the fact that the industry was not completely satisfied with prototype development progress and the costs involved. Further investigations of the feasibility of adapting foreign-designed equipment to the needs of the Maine industry are planned and will be conducted during the next biennium. A study to develop quality tests for raw herring had to be discontinued because of the death of the project head.

Maine's shrimp fishery continued to be a rapidly increasing bonus to fishermen and processors alike. Each year during the biennium the shrimp catch was more than double that of the previous year. Not surprisingly, this rapid growth brought with it certain built-in problems. For instance, each year processors based their production and marketing plans for the following year on the present year's catch, and when the catch turned out to be twice the volume expected, the usual market outlets became supersaturated. Furthermore, in areas where Maine shrimp had previously been unknown, there was considerable consumer resistance to the product, chiefly because of a lack of knowledge of how to cook the delicate cold-water crustaceans. To promote Maine shrimp and to correct the tendency of the consumer to overcook the product, the Department issued two publications, both of which quickly set new records for popularity. As new forms of the product were developed, and as publicity and marketing efforts increased, the industry expanded, and Maine shrimp began to receive wide acceptance not only in this country but in Europe as well.

Navigation Projects

The Department has continued to play an active role in the development of navigational improvements for the state's rivers and harbors, working closely with the United States Corps of Engineers and other state and federal agencies.

An indication of the importance of the Department's responsibility in this area may be gathered from the fact that over \$10,000,000 of federal money went for dredging projects, jetty and breakwater construction, and beach erosion studies since 1965. The work accomplished benefited not only the larger ports and harbors, but also some of the smallest coastal communities where commercial fishing is the primary source of livelihood.



Navigation projects, such as the dredging of river channels, are of prime concern to the Department, which represents the State's interest.

The Department's duties in connection with these navigational improvement projects include consultations with local officials and harbor committees, meetings with representatives of the Corps of Engineers, and contacts with members of the Maine Congressional Delegation. Department personnel help in assembling data and statistics on fisheries benefits and harbor usage. Briefs are prepared and presentations made at public hearings which are conducted regularly by the Corps. In addition, the Department serves as liaison agent with other state and federal offices, helping to coordinate reports and assisting in the arbitration of conflicting interests. This work has become increasingly complex as more and more state and federal agencies have become involved not only in the use of our navigable waters but also in the improvement and protection of the quality of these waters. For example, both the Maine Water and Air Environmental Improvement Commission and the Federal Water Pollution Control Administration have become increasingly active in all rivers and harbors projects, as has the recently created Wetlands Control Board on which, as Commissioner, I serve as chairman.

Research Laboratory

Problems of a completely unexpected nature also arose during the biennium, creating a great deal of work for Department personnel. Undoubtedly, the most notable of these was the fire which severely damaged the marine research laboratory at Boothbay Harbor on August 11, 1967. Before firemen could extinguish the blaze, the second story of the structure was completely destroyed, and the first floor suffered extensive smoke and water damage.

Emergency repairs had to be undertaken at once so that essential services could be continued with a minimum of delay. Thanks to the cooperation of all concerned, the building was restored to serviceable condition in a relatively short time. While plans were being considered as to whether or not to rebuild the second floor, additional laboratory space was provided on the first floor. The tank room and the aquarium area were also completely refurbished and new displays were installed.

Following meetings with Governor Curtis and state and federal officials, it was decided that a new laboratory facility, rather than an addition to the present structure, should be considered. Architect's plans for the new building have been prepared, a site has been selected, and arrangements are underway for state and federal funds with which to finance construction. The first phase of the new laboratory is expected to cost about \$103,000.

Programs and Services

To indicate some of the more important programs and services which have been carried on by the Department in the past two years, all of which will be described more fully later in this report, I would like to mention briefly the following:

In the field of promotion and marketing, the Department has been able to provide expanded services to the industry. With the help of federal matching funds, important and highly effective new promotional "tools" have been developed: an attractive and enthusiastically received recipe booklet, colorful point-of-purchase seafood posters, folders on Maine shrimp, and a top-quality motion picture film on the seafood industry. This last item, titled "Maine's Harvesters of the Sea," is being shown from coast to coast and already has had a most favorable reception. In fact, word has only just come in that the film has received the annual Chris Award for excellence at the Columbus Film

Festival, and in addition has been given the Chris Statuette, the top award in the large and highly competitive Business and Industry Category.

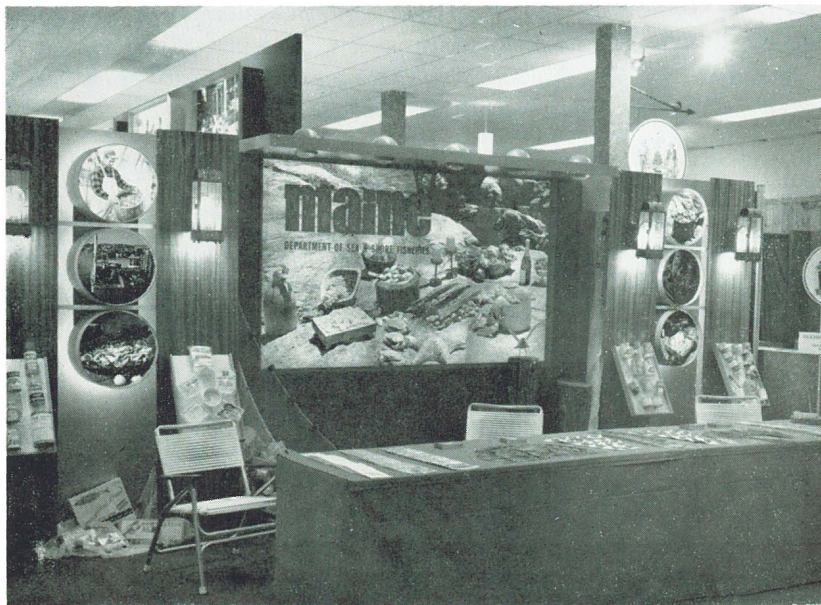


Research Director Robert L. Dow staffs display of live Maine lobsters at International Food Fair in Cologne, Germany.

In the field of marine research, a variety of projects and programs have been underway. A great deal of information has been obtained as a result of tagging and measuring lobsters. This data, together with other information, will be computerized, and it is hoped that significant conclusions can be drawn from the results. A study of the Maine shrimp has also been conducted during the past two years. This study included extensive exploratory fishing in the Gulf of Maine. A new pesticides monitoring program was established and gas chromatographic analysis equipment purchased. An allied project of pollution abatement has also been underway, and work has continued on methods for shellfish depuration.

Other programs include: a marine worm investigation, an anadromous fish study, work with the transplanting, growing and harvesting of oysters and oyster seed, a shellfish management program, an estuarine resources inventory, and a marine extension service.

All of this activity clearly demonstrates that the Department is attacking the problems of the state's ocean resources on a broad front. Adding a further dimension to these programs will be the appointment of a state oceanographer which has been made possible by the action of the special session of the 103rd Legislature.



Department's newly-purchased 20-foot exhibit for promoting Maine seafoods at shows and expositions has received wide acclaim as "best in show."

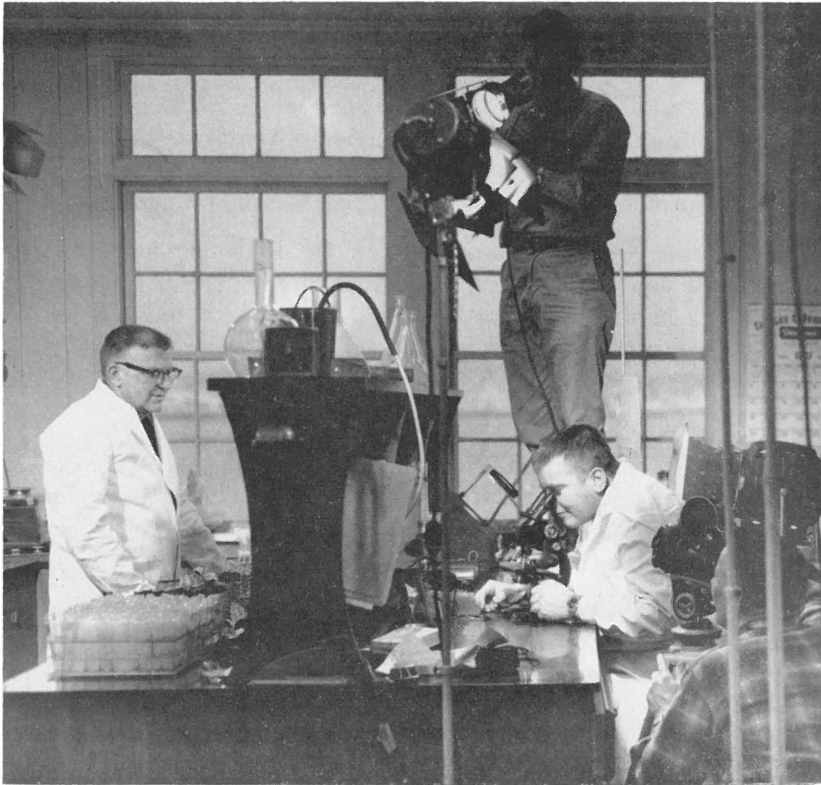


Seafood display in supermarket makes use of Department's point-of-sale materials to aid in sales promotion.

PROMOTION AND MARKETING DIVISION

George H. Taylor
Director

For a number of years the Division of Promotion and Marketing, because of a limited budget, was barely able to maintain existing services to the commercial fishing industry. With additional federal and state funds, however, it has been possible during the past biennium to establish a continuity of planning and to expand into new fields. Each additional activity was given careful consideration before it was undertaken to ensure its maximum effectiveness, and every effort has been made to obtain the best professional assistance so that each item produced would be of the highest quality possible within the limits of the established budget.



Camera crew films sequence at Fisheries Research Station at Boothbay Harbor during shooting of new Department film, "Maine's Harvesters of the Sea."

Foremost among the new projects completed during the biennium was the production of a new motion picture film, "Maine's Harvesters of the Sea," which covers all phases of the state's commercial fisheries. The film was produced by Bay State Film Productions, Inc. It is 28 minutes in length and was filmed in color at many scenic locations along the Maine coast. Fishermen and industry members gave their full cooperation to this production, helping to make it into an authentic and dramatic documentary, as well as a striking method of promoting Maine seafood products. Work on the film was completed prior to the end of the biennium, and a total of 70 prints were obtained. These will be distributed nationally by Association Films, Inc., to television stations, service clubs and other interested audiences. Finally, a world premiere showing of the film, accompanied by appropriate publicity, was scheduled for July of 1968, to introduce the film to the industry and to the public.

Additional funds have also made it possible for the Department to purchase two new exhibits to be used at food shows, expositions and similar events. These funds have also been employed to develop new and much-needed promotional and point-of-purchase materials for distribution to consumers and for use by supermarkets and seafood retailers. Further details on these materials will be found below.

Finally, the Division's four-man team of marketing and publicity specialists is now able to carry out a regular program of assistance to all segments of the commercial fisheries in such vital areas as market development, product promotion and publicity.

Promotional Materials

Four new items were added to the Department's list of promotional materials during the past biennium. The additional items include a full-color seafood poster, a new and enlarged seafood recipe booklet, and two pamphlets on shrimp cookery.

The new poster, which bears the caption "Join the Feast!" shows a display of Maine seafoods in a natural setting. Designed for use in supermarkets and retail outlets, some 2,000 have already been distributed.

"Fabulous Feasts with Maine Seafoods" has received praise from both the press and the general public. This publication represents a marked improvement in quality and content over a previous recipe booklet which it replaces. Over 20,000 have been distributed to date.

10

MAINE

How to Prepare MAINE Lobster

How to Eat MAINE Lobster

FREE RECIPES TAKE ONE

Join the Feast! Summer Seafoods from Maine

MAINE Seafood Cookbook

Commercial Fisheries MAINE

Shrimp Man

Maine's KING LOBSTER

MAINE SEA AND SHORE FISHERIES

19

cess of 20,000 thus far. "Marvelous Maine Shrimp" was designed primarily as a point-of-purchase piece for instore distribution. As of this writing, some 365,000 copies of this pamphlet, along with specially designed dispensers, have been distributed in chain stores throughout the northeast.

Still the most sought-after single promotional item, the red plastic Maine lobster pin had a distribution of 143,000 this past biennium. The popularity of such booklets as "Maine Seafood Cookouts," "Seafood Dishes of Maine," and "How to Prepare a Maine Clambake" remained undiminished. Over 179,000 copies of these publications reached the hands of an eager public. "How to Prepare Maine Lobster" enjoyed a distribution of 113,000 copies, while "How to Eat Maine Lobster" was given out to more than 157,000 persons. "Maine Seafood Secrets," the ever-popular, perennial point-of-sale piece received a distribution of 195,000 copies. "Commercial Fisheries of Maine" and "Maine's King Lobster" continued to find favor with teachers, students, writers and educators as well as people with an interest in Maine fisheries. Nearly 15,000 copies were sent out over the past two years. In addition to the above, over 2,100 lobster posters and 1,200 seafood posters went out to retail establishments.

Media Publicity

One of the most routinely important functions of the Division of Promotion and Marketing is disseminating informational materials and generating publicity for Maine seafoods. This activity most frequently takes the form of news releases, articles, and feature stories for newspapers and magazines. Staff members also make radio and television appearances in the interest of promoting the state's seafood products. In addition to the above, the Division prepares a number of reports, briefs, speeches and scripts, dealing with various phases of the Department's activities. Personnel cooperate closely with members of the news and communications media, and assistance is rendered to writers, photographers, editors, film makers, and television producers in gathering material which will publicize Maine's commercial fishing industry and its products.

Marketing

Record landings of Maine shrimp (over 18,000,000 pounds during the biennium just concluded) created a pressing need for finding new markets and expanding existing ones. Accordingly, the Division

launched an intensive campaign to develop markets and acquaint the consumer with this fine Maine product.

As an initial step, industry meetings were held to plan promotion and marketing procedures. An outgrowth of these meetings was the distribution of thousands of shrimp recipe leaflets in retail stores and markets.

Further promotional endeavors included featuring shrimp in the new Department fisheries film, "Maine's Harvesters of the Sea," and in a colorful new Department exhibit. Maine shrimp have also been featured extensively in the Department's advertising in newspapers and trade journals.

Efforts to promote shrimp were extended to Europe, with samples of the Maine product going to France, Portugal, Norway, Denmark, and West Germany. In the latter nation, foreign importers had a chance to examine Maine shrimp at International Food Fairs at Munich and Cologne.

Working closely with processors, brokers, distributors, and retailers, Department marketing specialists helped supervise the preparation and serving of Maine shrimp to students in school lunch programs. A periodic Marketing Memorandum, published by the Department and circulated among members of the Maine fishing industry, kept processors and dealers informed of new developments and furnished them with important information concerning potential shrimp buyers.

While it is difficult to pin-point the results of such a marketing program, there can be no doubt that it had its effect on the Maine shrimp industry. The past two years have seen an increase in the number of shrimp processing plants. New machinery has been added. Processors have experimented with marketing shrimp in different forms. A large overseas market has developed. Over 3,000,000 pounds of Maine shrimp went to England and Sweden during the 1967-68 season. Here in the United States, Maine shrimp appeared on supermarket shelves in Florida for the first time. Food chains that formerly showed no interest in this product now sought these shellfish eagerly, and sales shot upward.

Success in developing new markets for Maine shrimp by no means belongs to the Department of Sea and Shore Fisheries alone. In fact, the Department can only claim to have done its share. It was a concerted effort by all segments of the industry — processors, dealers,

retailers, and the fishermen themselves — that broke down barriers of resistance and created a wider market for Maine shrimp.

While much of the marketing effort was concentrated on shrimp, other seafood products were not neglected. The usual marketing services were provided to Maine's entire fishing industry. The Division continued to conduct market surveys, hold industry meetings, and distribute point-of-purchase materials. Staff members also provided specific marketing assistance when requested.

Marketing personnel have also worked to increase the export trade for Maine seafood products. In cooperation with the Maine World Trade Council, Maine sardines, smoked herring and shrimp were served to food importers at South American and Caribbean ports visited by the Maritime Academy training ship *State of Maine*. The Department assisted in the promotion of Seafood Festival USA which featured the serving of Maine seafood at the internationally famous Silver Ranch restaurant in Zurich, Switzerland. Department participation in several European trade fairs helped promote overseas interest in Maine fish products. Finally, dozens of foreign marketing contacts were provided to Maine's lobster, shrimp, whiting, and sardine industries in the interest of creating new markets for Maine seafood.

A mussel marketing survey in the New York metropolitan area was carried out for the purpose of expanding the market for this presently underutilized species. As a result of the survey, it was determined that with continued careful handling and the maintenance of good quality control, the Maine mussel market could sustain an industry of between \$45,000 and \$50,000 annually.

As an additional service, the Marketing Memorandum, mentioned above, was printed by the Department and periodically distributed to Maine seafood dealers and processors. This publication contains much helpful information on new product development, new production methods, new methods of packaging, shipping, and merchandising. Marketing leads, both domestic and foreign, are also printed in this bulletin, as well as news affecting the Maine fishing industry.

Exhibits and Displays

An integral part of the Division's activities concerns participation in expositions and major food and products shows. Over the years, a variety of exhibits and displays have been used to increase consumer

awareness of Maine's teeming harvest of the sea and of the excellent qualities of Maine seafoods.

A 20-foot Department exhibit was purchased in 1967 and first used in October of that year at the Fisheries Exposition at Boston's Suffolk Downs Race Track. The exhibit proved to be the hit of the show at this international gathering of the fishing industry.

An unmanned panel exhibit intended to acquaint the public with Department activities has been purchased for use at conventions, banquets, regional meetings and similar events.

Division personnel have continued to produce smaller displays for counter cases in State liquor stores and to provide materials for displays in store windows and other locations.

The availability of two new exhibits requiring a minimum time for assembly has resulted in a wider Department participation in various shows and events than was possible formerly. As a consequence, the products of Maine's fishing industry have received greater public exposure than ever before.

Special Events

The Department of Sea and Shore Fisheries regularly assists local groups in publicizing festivals, fishing tourneys, boat races and other special promotions connected with Maine's coast and its seafood products. In many cases, Department personnel attend planning sessions, supply promotional materials, take publicity photos, and generally work in close concert with local officials.

The National Food Editors Congress was one of the major special events in which the Department participated during the biennium. The Department served as co-host with other agencies representing the New England fisheries in staging a banquet at one of Boston's most elite seafood restaurants. The occasion was highlighted by a turntable display of Maine seafood products. Nearly 200 kits containing promotional materials, publicity releases, recipe booklets, and general information about Maine's fishing industry were mailed to visiting food editors in advance of the Congress. This action, coupled with the Department's participation in the event, gained much nationwide publicity for Maine's products of the sea.

The staging of special events often necessitates that the Division of Promotion and Marketing coordinate its activities with promotional

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This Week
MAGAZINE

485 Lexington Avenue, N.Y.

Editorial Department

memo
August 9, 1967

Mr. Ronald W. Green
Commissioner
Maine Dept. of Sea & Shore Fisheries
State House
Augusta, Maine 04330
Dear Mr. Green:



NATIONAL FISHERMAN

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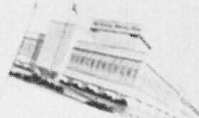
Springfield Television Broadcasting Corp.



July 26, 1967

The Providence Journal and The Evening Bulletin
PROVIDENCE, R.I. 02902

July 13, 1967



The Dallas Morning News
TEXAS LEADING NEWSPAPER
Communications Center, Dallas, Texas 75222

RADIO-TELEVISION STATIONS WFAA • TEXAS
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Mr. Ronald W. Green, Commissioner
Department of Sea and Shore Fisheries
State House
Augusta, Maine 04330

AMERICAN
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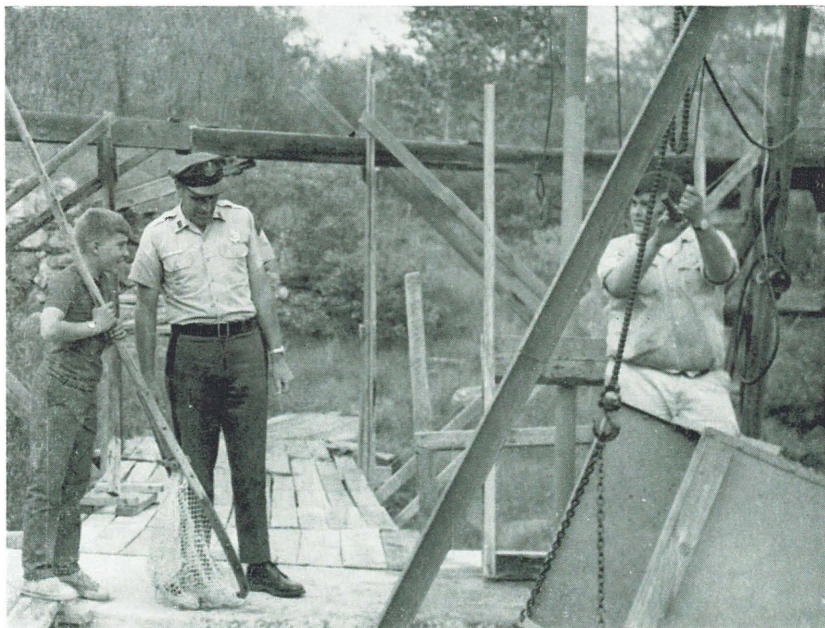


LEWISTON DAILY SUN
LEWISTON EVENING JOURNAL

divisions of other state agencies in lending assistance to local festival committees and organizational groups. In this connection, staff members have cooperated with employees of the Maine Department of Economic Development, the Maine Park and Recreation Commission, the Maine Sardine Council, and the Maine Department of Agriculture. The Department has also worked with the National Fisheries Institute, the U. S. Bureau of Commercial Fisheries and the New England seafood industry in various promotions for seafood products.



Maine Sea Goddess Cartha Palmer greets visitors at seafoods products display during National Food Editors Congress in Boston.



Sea and Shore Fisheries warden checks alewife run at Damariscotta Mills. Alewives are one of the species in the Department's anadromous fish program.



Coastal wardens pose in front of Department float plane.

ENFORCEMENT DIVISION

John F. Anderson

Chief Warden

In the 24th Biennial Report, reference was made to the fact that a steady increase in the demand for Maine lobsters, together with a consistently high market value, had created certain enforcement problems for the Department's Coastal Warden Service.

In particular, it was noted that a few Maine retailers and restaurants had been obtaining lobster meat which did not conform to Maine standards, and that in one instance an out-of-state dealer in imported lobster meat had brought action in Federal Court to require the Department to allow him to market his product in the state. The Attorney General's office represented the Department throughout the long and complicated legal procedures. At one point, the Maine Supreme Court was asked to rule on whether or not the Commissioner should be required to issue a license to an out-of-state firm, and this court ruled that the Commissioner was not required to do so, since his agency had no control or enforcement rights in another state. On a question of constitutionality, however, the Federal Court ruled that lobster meat processed in another state could be sold in Maine, so long as it conformed to Maine standards.

While the ruling of the Federal Court went against the Department's position, all the evidence to date indicates that this decision will have a minimum effect on the Maine lobster industry. All Maine lobster laws and regulations, whether they apply to live lobsters or to lobster meat, are still in force as far as the Maine industry is concerned. And since the demand for lobsters and for lobster products continues to increase, it appears most unlikely that the local market will be flooded by lobster meat from other states — lobster meat which, it should be emphasized, must conform to Maine standards.

At the end of the current biennium, the Coastal Warden Service had a total of thirty-seven officers. While their principal duty is the enforcement of the Sea and Shore Fisheries laws, they have other related duties, such as the enforcement of the provisions of the Maine Boat Law, regulations governing Snow Traveling Vehicles, and laws relating to litter. During the past two years, the Service has continued to cooperate with and assist the Maine State Police, the Department of Inland Fisheries and Game, the State Civil Defense and Public

Safety Agency, the United States Coast Guard, as well as other enforcement agencies.

General meetings were held during the biennium of all warden personnel. Matters relating to policy and procedure were thoroughly outlined and discussed. A general meeting of all Department personnel, including the Coastal Warden Service, the Division of Marine Research, and the Division of Promotion and Marketing, was held in December, 1967, and the programs of all segments of the Department were explained.

Three pieces of legislation affecting the fishing industry which should be noted were passed by the 103rd Legislature at its regular session. Briefly summarized, these require that: every person who fishes for lobsters or crabs must now display his buoy colors on his boat; from June 1 to August 31 of each year from 4:00 p.m. Eastern Daylight Saving Time on Saturday to one-half hour before sunrise the following Monday morning it is unlawful to raise, haul or transfer from the waters of this state any pot, trap, or other contrivance that is set for the taking of lobsters or crabs; and from June 1 through September 30 of each year it is now unlawful to set any purse seine within 1,500 feet of any stop seine, providing the operator of the stop seine meets certain requirements relative to boat, crew and the marking of the pocket by the use of floating kegs.

Officers of the Warden Service logged many hours of patrol duty in the Department's fleet of small outboard-type boats in the period from April 1 to November 1. Two larger patrol vessels, the 42-foot *Explorer* and the 63-foot *Guardian*, continued to be on standby duty throughout the year. The Department seaplane was used extensively in patrol work and also on search and rescue missions. It is expected that the plane will be of particular value in the enforcement of the ban on Sunday lobster fishing during the summer months.

Since the last report, two wardens have retired, and new appointments have been made to fill these vacancies.

Prosecutions for violations of the Sea and Shore Fisheries laws appear to be down somewhat as compared with the totals in the last report. Several factors may have been involved in this decrease in violations. Constantly improving cooperation on the part of the fishermen themselves is undoubtedly a major factor. Increased boat patrols and more extensive use of the airplane have also helped. And the availability of an abundance of clams in open areas, as well as the

installation of shellfish depuration plants have had a tendency to reduce the number of prosecutions for digging in closed or contaminated areas.

A listing of all prosecutions for violations of the Sea and Shore Fisheries laws during the biennium will be found on the pages which follow.

PROSECUTIONS OF VIOLATIONS

	<i>July 1, 1966 to June 30, 1967</i>	<i>July 1, 1967 to June 30, 1968</i>
Digging clams-quahogs in Closed Area	27	40
Digging clams-quahogs in Conservation Area	1	1
Digging marine worms without a license	1	6
Digging marine worms in Conservation Area	2	1
Lobstering without a license	21	15
Illegal possession lobsters and lobster meat	80	55
Illegal possession of lobster traps	6	4
Illegal possession clams-quahogs	14	14
Illegal possession clams-quahogs—Closed Area	9	14
Illegal possession and taking of smelts	6	21
Illegal possession marine worms	12	23
Illegal selling of clams	2	7
Illegal selling or buying of lobsters and lobster meat	1	2
Illegal selling of sea food	0	1
Illegal selling or buying of marine worms	0	6
Illegal transportation of clams	0	2
Illegal transportation of lobsters and lobster meat	2	1
Illegal setting of lobster traps—closed season	2	5
Illegal fishing of lobsters—other than con- ventional method	0	1
Unmarked lobster gear and lobster meat con- tainers	12	3
Molesting gear	13	6
Refusing to stand by—dumping	7	7
Juvenile offense	5	6
Operating trawl in closed waters	0	3

	<i>July 1, 1966 to June 30, 1967</i>	<i>July 1, 1967 to June 30, 1968</i>
Illegal resident commercial fishing	3	4
Dumping of litter	7	12
Selling fish wholesale without license	0	1
Operating truck in wholesale trade without supplemental license	2	0
Assault and battery	3	0
Obstructing coastal warden	1	1
Hauling lobster traps after 4 p.m. Saturday— June 1 to August 31	0	3
Failing to display buoy colors on boat	0	6
Removing lobster meat from shell without permit	1	0
Illegal possession of oysters	1	0
Illegal possession of oysters—Conservation Area	1	0
Taking scallops during closed season	0	1
	<hr/> 242	<hr/> 272

MARINE RESEARCH DIVISION

Robert L. Dow
Director

Expansion of marine research projects, begun in the previous biennium, have continued during the past two years at an accelerated pace. This Division is currently involved in more than a dozen major programs, and its staff has increased to a total of 25 scientists and technicians. Much of this expansion, of course, has been made possible by federal funds provided by Public Law 88-309 and by state matching funds.

While the Marine Research Division as a matter of routine carries on a variety of services for Maine's commercial fisheries, it is also conducting specific studies and investigations of important segments of the state's marine resources. The most important of these programs are summarized as follows:

Lobster Research

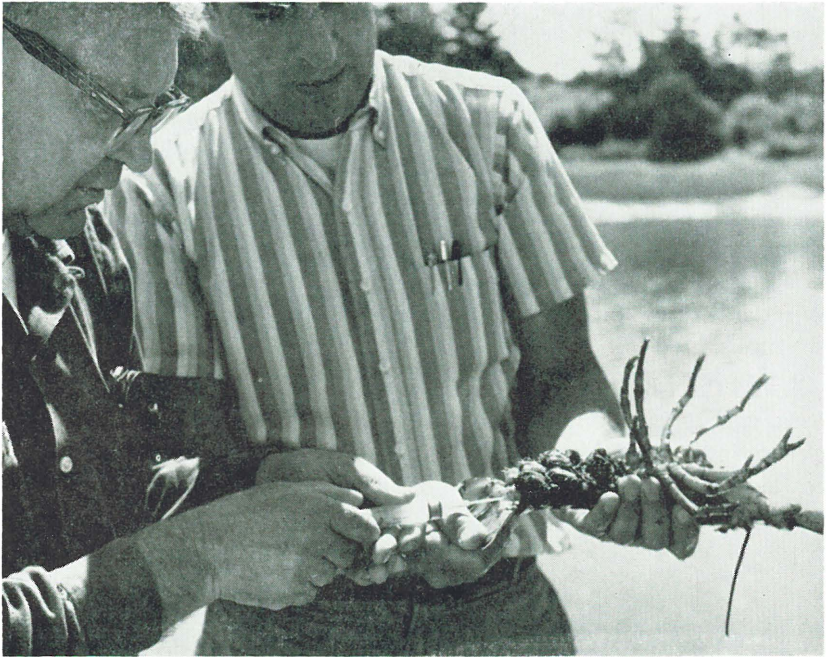
Lobster research during the biennium has chiefly been concerned with two separate approaches: a sampling program, and a compilation of biological and environmental data from an area at Cousin's Island where heated water is discharged from the Central Maine Power Company generating plant.

A multi-stage sampling plan has been devised and a system of regularly checking lobster buying stations all along the Maine coast was put in operation. The data obtained has included the volume of the catch, the amount of fishing effort, and the size and sex composition of the catch. Altogether, the sampling crew checked more than 10½ tons of lobsters comprising 18,401 individuals.

Included in the data obtained at the Cousin's Island project are extensive water temperature statistics. Utilizing a twelve-probe thermograph, water temperatures have been tabulated at strategically located stations throughout the cove. The purpose of these studies is to learn if the area with its present special thermal conditions is suitable for lobster rearing.

Shrimp Research

An investigation of the biology and distribution of Northern shrimp is being carried out in an attempt to determine the causes of the



Marine scientist draws blood sample from lobster. Size, sex, and age distribution, mortality rates, and population studies furnish the marine scientist with vital information on the life-cycle of the Maine lobster.



Worm population is checked by marine scientists in sample plot. Findings will aid in determining the approximate number of worms per acre, size variation, and general distribution of marine worms.

large annual fluctuations in abundance and the extensive seasonal migrations, the optimum level of fishing effort on the stocks, and the possibility of estimating the size of future commercial stocks. Before any of these basic questions can be answered, however, the biological characteristics of the shrimp must be understood.

An extensive sampling program has been carried out on inshore and offshore grounds once a month with examination of the samples for size, sex, growth, stomach contents, egg numbers and development, and parasites. Larvae sampling has been carried on in the spring.



Scientist studies specimens of Northern shrimp. Maine has experienced a remarkable increase in shrimp landings since 1962. More than 18,000,000 pounds of shrimp have been taken from the Gulf of Maine during the past two-year period.

This program has revealed the complex and constantly changing seasonal, geographical, and vertical distributions of the shrimp and their probable causal relations with water temperatures. The relations of the biological characteristics of the shrimp with these migrations and temperatures suggest factors controlling natural rates of population increase, and give a probable reason for the absence of shrimp in commercial quantities in previous years. The larval studies have shown how the essential parameters of natural mortality, fishing pressure on the available stock, and total abundance of the commercial stock may be estimated.

The research program will continue with these studies in order to improve the accuracy of the information which they yield. Laboratory studies, using controlled water temperature tanks, will be carried out to confirm the conclusions drawn from study of the shrimp in the Gulf of Maine.

Marine Worm Project

Various aspects of the biology of sandworms and bloodworms have been pursued. These include studies of size-frequency distributions, length-weight relationships, length-segment relationships, numbers of eggs as a function of worm length, the rate of increase in egg diameters against time, the size and quantity of worms with respect to depth in mud and distance from the low water mark, sex ratios, spawning habits, worm parasites, and the calculation of the total number of sandworms and bloodworms per acre in the Wiscasset conservation area.

Studies of harvesting and handling methods employed by the marine worm industry indicate that temperature, salinity and moisture-content are the most significant factors in maintaining harvested worms in good condition.

In addition, a plastic sheet pack to control moisture loss during shipping and storage has been developed. This is presently in use for shipping bloodworms on a limited scale.

Surveys of other species of marine worms have also been conducted to determine their suitability as bait for salt water sport fishing. It appears, however, that those species with some potential as a bait worm are not available in sufficient quantities to support a commercial market.

Anadromous Fish

The anadromous fish resources of Maine, under proper development and management, are subject to considerable expansion and impact on both the commercial and recreational economies of Maine. With matching funds available under P.L. 89-304 the Department has undertaken three projects to further improve the levels of these resources and increase their utilization.

Project number 1, known as AFC-2, provides for an inventory of all commercial anadromous fishery areas in Maine, to document their present conditions, to determine their potential for initial or further development and to set a priority for this development. This project was initiated on July 1, 1967, and will be completed on June 30, 1969.

Project 2, or AFC-6, is an outgrowth of our initial project. Approved for a period beginning February 28, 1968, and ending June 30, 1969, it provides matching funds for fishway construction and stream improvement in commercial fishery areas.

The final project under anadromous fishery activities and P.L. 89-304 is a survey of our striped bass resources. Inasmuch as this species is rapidly becoming the major sport fish of our Maine coast and because of its impact on our recreational economy the Department has begun a survey of coastal areas to determine the potential and extent of this resource. This project known as AFS-4 was started on April 8, 1968.

Shellfish Management Program

The shellfish management program is largely a function of the towns involved, and a town electing to participate formulates its own management program with advice and assistance provided by a Department marine scientist. The program is then presented to the Commissioner of Sea and Shore Fisheries for evaluation and approval. If approved, local shellfish conservation committees are formed, money appropriated, harvesting regulated in certain areas, and ordinances enacted when desirable. Programs and ordinances must be renewed every three years. The Department furnishes assistance to town officials in preparing their existing program for renewal. Thirty-five towns are currently participating in the program.

Oyster Growing

Oyster spawning in the state, following a set found in 1964 in the Piscataqua River, reached alarmingly low levels in the years which

followed. Since it was clear that, if oyster stocks were going to sustain a population, new areas for reproduction would have to be found, the Department's marine scientists began an investigation of potential growing areas.

In 1966, strings of cultch were suspended from a raft moored in Spinney Creek in the town of Eliot in the hope of obtaining a set of juvenile oysters. Spawning occurred from late June through August, with setting throughout the summer. Average growth this first year was 17.5 mm. The following year, the average size measured 55 mm., with a range of 20 to 96 mm. At this rate of growth, these oysters may reach market size at three years.

While production of seed oysters was the primary purpose of this program, it may be possible, after depuration, to supply market size oysters to areas within the state, such as the Sheepscot River area.

Clam Depuration

Adequate developmental research has been accomplished by the Department of Sea and Shore Fisheries so that clam depuration using ultra-violet light for water treatment is operational in Maine.

A depuration plant at Phippsburg has been operating successfully since August, 1964 using moderately polluted clams from the lower Kennebec River. A second plant went into operation in October of 1967 which uses clams from moderately polluted areas in the towns of Searsport and Stockton Springs.

In addition to controlled depuration, a small sterilizer has been designed for use in de-sanding and wet storage of non-polluted clams in areas where naturally clean water is not available. Two of these wet storage plants are operating during the summer season. One is in Belfast and the other in Ogunquit.

It is expected that there will be demands for one or perhaps two more depuration plants and several wet storage and de-sanding plants in the very near future.

Pollution Survey

In order to assure the consuming public of shellfish of wholesome quality, growing areas are periodically re-examined to determine their suitability for harvesting. In addition to monitoring these growing areas, the pollution survey unit conducts laboratory tests on shellfish obtained from two depuration plants, as well as shucked and unshucked clams from shellfish dealers.



Work with gas chromatography equipment enables marine resources scientist to identify and find the exact quantity of separated compounds.

Pesticides Studies

The Department of Sea and Shore Fisheries tests samples of clams and other marine organisms on a regular basis to detect the presence of pesticides. None of the samples analyzed showed a pesticide content anywhere near the danger level for humans.

Samples of shrimp, oysters, tomcod, moon snails, sandworms, bloodworms, starfish, littorina, ribbed mussels, blue mussels, alewives, smelts, and green crabs were also analyzed. Only the starfish, blue mussel and moon snail samples failed to show pesticide residue. This limited sampling would indicate a widespread residue of pesticides in the environment.

Shellfish Inspection

Two classes of permits are issued under the Department's shellfish inspection program for the protection of the consumer and the industry.

Interstate certification is granted to plants or individuals involved in interstate trade of shellfish, both in the shell and shucked-out meats, when these establishments meet the standards set by the U. S. Public Health Service. An intrastate permit is issued to smaller operators engaged in the shucking of shellfish for sale only within the state.

Once the required standards of qualification have been met, holders of either class of permit are subjected to periodic inspections to insure their maintaining a high level of conformance. Interstate certification was issued to thirty-two companies and individuals during 1967, and forty-seven intrastate permits were granted during the same period.

Estuarine Inventory



Sea and Shore Fisheries marine scientist checks harvest of Irish moss (carrageen). Sea moss is used extensively as a stabilizing agent in food products and pharmaceutical preparations. Over 5½ million pounds valued at more than \$100,000 were harvested in Maine during the past biennium.

The Estuarine Inventory was the last of the projects activated under Public Law 88-309, and thus far work has been limited to three species: Irish moss, the American oyster, and the edible blue mussel.

Department personnel assigned to this project have cooperated with the sea moss industry in clearing, marking and outlining regrowth plots. SCUBA gear has been used extensively in connection with this work, and preliminary planning was completed for the use of under-water photographic techniques for estimating the amount of moss in a given area. Tests were also conducted with a deep-water moss pumper. Considerable time was spent with moss gatherers along the coast in an effort to assist them in improving production. As a result, production at the Orr's Island plant showed an increase of close to 100 per cent over the previous year.

Project personnel have also participated in the transplanting of oysters to the Damariscotta River, using SCUBA gear. Thirty-three bushels were collected and transplanted in this manner.

Considerable time was spent with mussel dealers and fishermen in establishing quality controls to improve the marketing of this species.

Marine Fisheries Extension Service

The Marine Fisheries Extension Service was established in January of 1967 for the purpose of making biological, technological, and economic information affecting the fisheries available to fishermen and other members of the industry.

To facilitate distribution of marine fisheries information, six county extension committees and two town committees have been organized. The committees hold monthly meetings from September through May, during which programs are featured which are of direct interest and benefit to members of the fishing industry.

A bulletin containing biographical sketches of people active in the Extension Service and articles describing research activities and findings has been distributed to persons who have attended one or more committee meetings. In addition, audio-visual project reports were prepared on various Department research activities, and these have been shown at committee meetings.

DIVISION OF STATISTICS

E. Kent Glover

Statistician

In accepting the position of Department Statistician, I replaced Louis R. Cates of Rockland who retired in December, 1967 after 25 years of service with the Department of Sea and Shore Fisheries. I want to take this opportunity to thank him for the invaluable help he has given me during the difficult indoctrination period. I consider myself fortunate in having had so able a teacher.

The total volume of fish and shellfish landed by Maine fishermen during the years 1966 and 1967 is almost parallel to the landings for 1964 and 1965 (397,829,053 pounds vs. 397,421,061 pounds). Despite these near-equal figures for landings, the value of the fish caught during 1966-67 amounted to \$47,302,195, exceeding the value of fish caught the previous biennium by almost \$3.5 million.

Again, while total landings for the two consecutive bienniums remained essentially the same, there was wide fluctuation in volume and value in certain individual species. Groundfish production showed



Statisticians Louis R. Cates of Rockland and D. Arthur McKown of Boothbay Harbor scan MAINE LANDINGS monthly folder. Cates retired last December after 25 years' service.

LANDING AT MAINE PORTS, 1966 and 1967

SPECIES	TOTAL			
	1967		1966	
Fish	Pounds	Value	Pounds	Value
COD:				
Large	2,355,527	\$127,744	1,531,776	\$101,690
Market	1,130,383	59,298	1,251,770	73,687
Scrod	9,656	552	18,853	988
CUSK	193,707	11,493	303,044	18,579
HADDOCK:				
Large	699,247	77,489	863,622	104,776
Scrod	1,651,207	137,221	909,518	69,506
HAKE, WHITE	1,412,534	60,673	2,017,638	86,677
POLLOCK	1,095,073	54,939	1,076,035	52,178
OCEAN PERCH	62,153,765	2,408,184	65,082,169	2,678,683
TOTAL GROUNDFISH AND OCEAN PERCH	70,701,099	2,937,593	73,054,425	3,186,764
ALEWIVES	1,617,305	47,502	1,785,995	34,310
EELS, COMMON	48,647	9,439	48,700	9,740
FLOUNDERS:				
Gray Sole	528,603	50,649	413,818	38,804
Lemon Sole	312	31	4,505	252
Yellowtail	77,850	6,189	21,800	1,723
Blackback	102,807	5,949	91,696	4,947
Dab	753,075	45,872	870,086	47,936
GRAYFISH	150,820	1,060	476,995	3,510
HALIBUT	99,763	40,007	101,945	37,351
HERRING, SEA	64,599,660	1,537,697	58,298,675	1,208,693
MACKEREL	352,683	15,754	689,795	22,849
SALMON	232	211	292	236
SHAD	125	9	2,072	74
SMELT	158,361	33,315	254,755	48,927
STRIPED BASS	37	6	—	—
STURGEON, COMMON	1,583	135	444	55
SWORDFISH	88,204	30,270	170,670	72,877
TUNA, BLUEFIN	47,922	4,996	91,549	13,686
WHITING	20,725,540	504,067	29,699,140	1,142,501
WOLFFISH (Catfish)	14,292	573	11,732	382
UNCLASSIFIED:				
For Food	917,153	66,503	303,189	21,278
For Bait, Reduction, and Animal Food	2,810,045	30,124	759,093	14,474
TOTAL FISH	163,796,118	5,367,951	167,151,371	5,911,369
Shellfish, Etc.				
CRABS:				
Green	10,375	1,075	—	—
Rock	1,678,413	75,623	1,774,188	75,111
LOBSTERS (Maine)	16,489,196	13,597,869	19,915,816	14,904,498
SHRIMP	6,925,058	864,974	3,831,207	541,669
CLAM MEATS:				
Soft	3,176,209	1,478,777	3,008,203	1,387,246
Hard (Quahogs)	—	—	33	15
MUSSEL MEATS, SEA	370,703	31,473	239,789	20,364
OYSTER MEATS	4,100	4,432	4,118	4,972
PERIWINKLE MEATS	54,148	13,596	51,686	13,209
SCALLOP MEATS, EDIBLE, SEA	188,305	151,501	319,505	181,155
SEA URCHINS (SEA EGGS)	110,565	2,908	142,995	4,193
SEA MOSS	3,180,000	55,650	2,440,000	45,002
BLOODWORMS	748,110	834,826	716,211	731,335
SANDWORMS	706,435	492,384	796,196	509,018
TOTAL SHELLFISH, ETC.	33,641,617	17,605,088	33,239,947	18,417,787
GRAND TOTAL	197,437,735	22,973,039	200,391,318	24,329,156

EXPENDITURES

	<i>July 1, 1966 to June 30, 1967</i>	<i>July 1, 1967 to June 30, 1968</i>
Administration	\$ 66,962.13	\$ 67,819.48
Statistics	9,972.47	9,452.91
Warden Service	274,950.07	285,337.68
Aircraft	3,244.74	3,336.37
Special Advertising	3,968.15	3,428.98
Special Publicity	37,650.21	34,013.03
Special Marketing Research	21,249.17	18,750.76
Patrol Boats	59,411.79	51,257.42
Propagation of Shellfish	1,164.04	1,165.81
Research Station	29,209.37	31,914.33
Laboratory Research	50,367.45	50,303.01
Shellfish Management	47,853.47	50,720.71
Atlantic States Marine Fisheries	15,764.00	3,433.59
Res. and Dev. of Shellfish Res.	18,001.77	19,189.48
Marine Research	31,008.55	10,409.00
Quahog Tax	—	191.10
Economic and Biological Survey	4,982.69	14,349.33
Lobster Fund	18,932.02	27,013.40
Marine Watercraft	11,390.02	10,255.72
Federal State Mar. Res.	203,218.34	202,912.23
Marine Worm Fund	26,985.84	32,850.23
	<hr/> \$936,286.29	<hr/> \$928,104.57

CONCLUSION

Included in this report are only the bare outlines of the activities of the Department of Sea and Shore Fisheries during the past biennium. Frequently, of course, the details of any program are both more interesting and more significant than any highly compressed summary may indicate, but to supply such details would require many more pages than I have here at my disposal. For those interested, however, I would be happy to discuss personally and at length any phase of the Department's work, going into as much detail as may be desired.

Finally, I would like to take this opportunity to express my appreciation for the helpful counsel and invaluable assistance I have received from many individuals and groups who have an interest in Maine's commercial fisheries. Particularly I would like to thank Governor Kenneth M. Curtis, the members of the Executive Council, and the Maine Congressional Delegation for their unwavering support of all programs and proposals designed to benefit the state's fishing industry.

In addition I would also like to acknowledge the substantial help and firm support given by the members of the Sea and Shore Fisheries Advisory Council: Augustus C. Heanssler, Vernon P. McFadden, Arnold L. McConchie, Charles E. Olsen and David E. Bergson. And finally I must again give credit where credit is due to all members of the fishing industry and to the staff of the Department of Sea and Shore Fisheries for their full cooperation and complete dedication to the job of helping the industry to grow and prosper.

